



GENE-BASED
IMMUNOTHERAPY



GENE THERAPY



GENE DISCOVERY

Interim Report 2000

BioMedica has developed into one of the world's premier gene-based companies with programmes in gene therapy, gene-based immunotherapy and gene discovery.

The first half of 2000 has been a busy time for the Company with significant progress being made on a number of fronts. The Directors have continued their strategy of managing risk by placing BioMedica's technology and product components into as many commercial opportunities as possible while retaining firm control on spending. This has been achieved through creative deal structures with both large and small companies as well as

by pursuing internal product development programmes. In addition, the Company has recently further enhanced shareholder value by using its core gene delivery technologies in the field of gene discovery through the formation of a new Gene Discovery Division.

Clinical Developments

MetXia-P450™ is progressing well through the BC1 trial, a study in late stage cancer patients with

residual skin nodules. The trial is proceeding according to plan and the first results from the dose ranging part of the study will be available shortly. Earlier in the year the Company initiated the OC1 trial, in which the product is being administered to ovarian cancer patients.

TroVax™, the Company's lead immunotherapy product, is proceeding through its regulatory approval process. It has received

conditional approval by the Gene Therapy Advisory Committee subject only to some non-technical revisions to the protocol and patient information leaflet. The product has been manufactured in preparation for the trial, TV1, to start at the end of the year. The trial will test TroVax™ in patients suffering from colorectal cancer and will be conducted at the Christie Hospital in Manchester. Although there has been significant commercial

interest in TroVax™, the Directors have decided to fund the first trial from the Company's own resources in order to increase the value of any future licensing deal with a pharmaceutical company.

Preclinical Research and Development

The research and development pipeline in BioMedica goes from strength to strength with significant developments in a number of areas. For example, in the neurodegenerative disease programme the Company's gene transfer systems for the brain were described at the Forum for European Neurosciences 2000 conference in June. The presentation was very well received and we anticipate that contacts made at the conference will develop into collaborations in the future involving the Company's Parkinson's disease

product, ProSavin®, and other opportunities.

In the gene-based immunotherapy field, the Company has obtained preclinical efficacy data using one of its proprietary anti-tumour antibodies. These data are now the focus of early-stage discussions with a major pharmaceutical company.

Product Collaborations

The Company's collaboration in cardiovascular disease with Aventis is making good progress. In June BioMedica announced that the scope of the relationship had expanded. In line with the original agreement, Aventis nominated a second gene to be used in association with the Company's hypoxia response element in cardiovascular disease. In addition, a new agreement was reached with Aventis whereby it is

conducting a feasibility study for the use of our gene delivery technology in cardiovascular products. If successful, this could lead to a further full commercial license agreement with associated access payments, milestones and royalties.

In February and March two deals involving products related to TroVax™ were signed. In the first of these a veterinary version of TroVax™ was licensed to the major European veterinary company, Virbac SA. The goal of this collaboration is to produce an anti-cancer immunotherapy for companion animals. Many dogs, in particular, die of cancer and there is an increasing willingness on the part of owners to pay significant sums to extend the life of their pets. Therefore, there is substantial market potential. Revenues will be shared with Virbac, who will

meet the costs of product development.

In the second TroVax™-related deal the Company agreed to Nycomed Amersham developing a tumour-imaging product based on a proprietary antibody that specifically recognises those tumours that should respond to TroVax™. This is important on two counts. First, it provides BioMedica with another route to revenues at no additional cost to the Company. Secondly, it provides a diagnostic/prognostic product that will support the use of TroVax™ in the market by identifying those patients that are most suited to the treatment.

The ongoing collaboration with Modex SA of Switzerland, aimed at producing a novel diabetes therapy has achieved significant success in that BioMedica's

LentiVector® technology has now been specifically configured for the product. In addition the Company has achieved high-level gene transfer to β -islet cells from the pancreas.

In cell-based therapy, IDM and BioMedica are making progress in matching the Company's MacroGen® technology to IDM's cell processor in a programme that is aimed at taking a joint cell-based therapy into clinical trial as soon as possible.

Gene Discovery

BioMedica has successfully established a strong gene therapy activity and a very exciting gene-based immunotherapy programme. Both of these have products in clinical development, a pipeline of future clinical products and collaborations with both large and small companies. In February,

BioMedica signed an agreement granting AstraZeneca certain rights to use the Company's LentiVector® technology, outside the fields of gene therapy and gene-based immunotherapy, for its internal target validation and drug discovery programmes. This was the second such deal that BioMedica had signed, the first being an early agreement with Aventis, and it showed that there is a clear commercial opportunity for the Company to generate short-term revenue from a series of similar deals.

The key to the opportunity is the fact that the pharmaceutical industry, via its various activities in genomics and proteomics, is identifying a very large number of genes that are in some way linked to disease processes. The challenge that they have now is to pinpoint those relatively few important

genes that are mechanistically linked to disease and are therefore worthy of further substantial investment as part of a drug development programme.

This narrowing of focus is the process of target validation and it requires a range of technologies including high efficiency, non-toxic gene transfer into various model systems that mimic disease processes. BioMedica's LentiVector® technology is ideally suited to meet this challenge. The recognition of this opportunity prompted the Company to announce the formation of a Drug Discovery Unit in February.

Since February, the scope for target validation deals has further increased and the Company has completed the testing of a new gene discovery technology, called Smartomics™, which has now

been shown to accelerate the process of identifying genes that are mechanistically linked to disease processes. The Company has already used this technology to identify genes that may be active in cancer, arthritis and cardiovascular disease and it has gene discovery programmes in asthma and in neurodegenerative disease.

Smartomics™ has considerable potential to generate shareholder value via patents covering a variety of genes and through collaborative agreements with the pharmaceutical industry. In order to realise this potential BioMedica has recently established a Gene Discovery Division that will have a headcount of about 20 and will focus on maximising shareholder value in the important and emerging field of genomics. The Company will not be competing

directly with the major genomics and proteomics companies but will, instead, be taking a complementary, more focussed approach to gene discovery. Indeed, some of the larger genomics companies are potential partners in collaborations based on Smartomics™ and LentiVector®-based target validation.

Intellectual Property

BioMedica continues to pursue its aggressive intellectual property strategy and a number of new technologies have been acquired by the Company during the first half of the year. In addition a number of our patents are now proceeding through the US and European examination process. In February BioMedica was awarded a US patent covering important aspects of gene transfer technology. Further successful applications are expected in the coming year.

Changes to the Board

In March the Company was pleased to announce that Dr Paul Durrands had agreed to join the Board of Oxford BioMedica as Commercial Director with special responsibility for new corporate opportunities. In addition, he has taken on the role of Chief Operating Officer for the new Gene Discovery Division in which he will be responsible for driving forward the commercial success of the new activity.

Paul trained as a Chartered Accountant with Coopers & Lybrand and has a PhD in Molecular Biology from the University of Bath. After qualifying as an accountant he joined BOC's distribution division for 5 years in which time he was involved in acquisitions and major contracts. He subsequently spent 3 years as Group Finance Director

for the Pig Improvement Company (PIC), a division of Dalgety, during which time he was involved in acquisitions and expansion of the business worldwide. His most recent role was as Finance Director of the joint venture between Yoplait and Dairy Crest (YDC), working on the strategy and integration of the Raines Dairy Foods business acquired by YDC.

Financing – £8.5M Placing

In August, subsequent to the half-year end, BioMedica completed a placing of 14.6 million shares at 60p per share thereby raising £8.5 million, net of costs, to fund the new Gene Discovery Division. The Company made use of a disapplication of pre-emption rights, approved at the last AGM to raise the funds quickly and cost-effectively. Moving fast is

essential in what is generally regarded as a 'land-grab' race to identify the most important disease related genes amongst those that comprise the human genome. New developments in this field created the exceptional circumstances which led the Directors to issue a limited number of shares without going through the usual extended approval process. This is enabling the Company to quickly acquire facilities and staff for the new Division.

BioMedica has always made clear its intention to move from AIM to the Official List of the London Stock Exchange. When TroVax™ enters clinical trials the Company will meet the performance criteria defined in Chapter 20 of The Listing Rules. Assuming the TroVax™ programme stays on target and assuming that market

conditions are favourable, the Directors anticipate that a move to the Official List may be possible in the first quarter of 2001. No firm decision has been made, at this stage, about further fund raising at that time.

Financial Performance

We continued throughout the first half of 2000 to maintain the financial discipline that has characterised the period since BioMedica became a public company in 1996. As a result of deals with Modex SA, Virbac SA, AstraZeneca and Nycomed Amersham, income was up 77% on the first half of 1999. With increased research and development and clinical activity, and in line with our budget, operating expenses were up 28% on 1999. Grant income, mostly in

relation to the BC1 clinical programme, was lower than last year, while interest earned on deposits was higher. The pre-tax loss was £2.69 million, an increase of 28% on 1999. Following the introduction in April 2000 of R&D tax relief, there is a tax credit of £110,000 leading to a retained loss of £2.58 million for the first half of 2000.

The cash balance at 30 June 2000 was £5.92 million. The cash burn of £2.44 million included the payment of £275,000 for rights to certain genes, for which there was a corresponding receipt of £275,000 in respect of the issue of shares. In addition, 13.7 million shares were placed at 38p per share in January, raising net proceeds of £5.05 million.

In Closing

The first half of 2000 has been very successful and we look forward to reporting on the full year's activities. By then there will be further progress in the Gene Therapy and Gene-based Immunotherapy programmes and the Gene Discovery Division will be fully up and running. None of this would be possible without the continued dedication of our excellent staff and the support of our shareholders, and our sincere thanks go to them. We welcome the new shareholders that have joined the register over the past six months and we look forward to working together to build a prosperous future.



Alan Goodman Chairman



Prof. Alan Kingsman Chief Executive

Consolidated Profit & Loss Account

| | 6 months ended 30 June 2000 (unaudited) £000's | 6 months ended 30 June 1999 (unaudited) £000's | Year ended 31 December 1999 (audited) £000's |
|------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------|
| Turnover | 344 | 194 | 436 |
| Research and development | (2,507) | (1,908) | (3,764) |
| Administrative expenses | (805) | (689) | (1,346) |
| Operating expenses | (3,312) | (2,597) | (5,110) |
| Other operating income: government grants receivable | 85 | 181 | 267 |
| Net operating expenses | (3,227) | (2,416) | (4,843) |
| Operating loss | (2,883) | (2,222) | (4,407) |
| Interest receivable | 193 | 119 | 218 |
| Loss on ordinary activities before taxation | (2,690) | (2,103) | (4,189) |
| Tax on loss on ordinary activities | 110 | - | - |
| Loss for the period | (2,580) | (2,103) | (4,189) |
| Loss and diluted loss per ordinary share | (1.7p) | (1.6p) | (3.0p) |

The results for the above periods are derived entirely from continuing operations.

The Group has no recognised gains and losses other than the above results, and therefore no separate statement of total recognised gains and losses has been presented.

There is no difference between the loss on ordinary activities before taxation for the periods stated above, and their historical cost equivalents.

Consolidated Balance Sheet

| | As at 30 June 2000 (unaudited) £000's | As at 30 June 1999 (unaudited) £000's | As at 31 December 1999 (audited) £000's |
|------------------------------------------------|---------------------------------------------------|---------------------------------------------------|-----------------------------------------------------|
| Fixed assets | | | |
| Intangible assets | 307 | 357 | 332 |
| Tangible assets | 715 | 844 | 773 |
| Investments | 26 | - | 26 |
| | <u>1,048</u> | <u>1,201</u> | <u>1,131</u> |
| Current assets | | | |
| Debtors: amounts falling due within one year | 708 | 497 | 432 |
| Cash at bank and in hand | 5,915 | 4,977 | 3,039 |
| | <u>6,623</u> | <u>5,474</u> | <u>3,471</u> |
| Creditors: amounts falling due within one year | <u>(1,087)</u> | <u>(788)</u> | <u>(801)</u> |
| Net current assets | <u>5,536</u> | <u>4,686</u> | <u>2,670</u> |
| Total assets less current liabilities | 6,584 | 5,887 | 3,801 |
| Provisions for liabilities and charges | <u>(43)</u> | - | - |
| Net assets | <u><u>6,541</u></u> | <u><u>5,887</u></u> | <u><u>3,801</u></u> |
| Capital and reserves | | | |
| Called-up share capital | 1,564 | 1,422 | 1,422 |
| Share premium account | 17,727 | 12,549 | 12,549 |
| Other reserves | 711 | 711 | 711 |
| Profit and loss account (deficit) | <u>(13,461)</u> | <u>(8,795)</u> | <u>(10,881)</u> |
| Equity shareholders' funds | <u><u>6,541</u></u> | <u><u>5,887</u></u> | <u><u>3,801</u></u> |

Consolidated Cash Flow Statement

| | 6 months ended 30 June 2000 (unaudited) £000's | 6 months ended 30 June 1999 (unaudited) £000's | Year ended 31 December 1999 (audited) £000's |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------|
| Operating activities | | | |
| Net cash outflow from continuing operating activities (reconciliation to operating loss on page 9) | <u>(2,547)</u> | <u>(1,861)</u> | <u>(3,800)</u> |
| Returns on investments and servicing of finance | | | |
| Interest received | <u>193</u> | <u>102</u> | <u>218</u> |
| Capital expenditure and financial investment | | | |
| Purchase of tangible fixed assets | (90) | (47) | (136) |
| Purchase of fixed asset investments | - | - | (26) |
| | <u>(90)</u> | <u>(47)</u> | <u>(162)</u> |
| Net cash outflow before management of liquid resources and financing | <u>(2,444)</u> | <u>(1,806)</u> | <u>(3,744)</u> |
| Management of liquid resources | | | |
| Transfer to deposit accounts | (7,740) | (6,291) | (6,291) |
| Transfer to current accounts | <u>1,899</u> | <u>1,371</u> | <u>6,291</u> |
| | <u>(5,841)</u> | <u>(4,920)</u> | <u>-</u> |
| Financing | | | |
| Issue of ordinary shares | 5,481 | 3,556 | 3,556 |
| Expenses of share issue | <u>(161)</u> | <u>(339)</u> | <u>(339)</u> |
| | <u>5,320</u> | <u>3,217</u> | <u>3,217</u> |
| Decrease in cash in the period | <u>(2,965)</u> | <u>(3,509)</u> | <u>(527)</u> |

Reconciliation of operating profit to net cash outflow from operating activities

Continuing activities

| | |
|---------------------------------------------------------------|--|
| Operating loss | |
| Amortisation on intangible fixed assets | |
| Depreciation on tangible fixed assets | |
| Loss on disposal of tangible fixed assets | |
| Increase in trade debtors | |
| (Increase)/decrease in other debtors and other tax receivable | |
| Increase in prepayments and accrued income | |
| Increase in trade creditors | |
| (Decrease)/increase in other taxation and social security | |
| Increase in accruals and deferred income | |
| Increase in provisions for liabilities and charges | |

Net cash outflow from continuing operating activities

| 6 months ended 30 June 2000 (unaudited) £000's | 6 months ended 30 June 1999 (unaudited) £000's | Year ended 31 December 1999 (audited) £000's |
|------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------|
| (2,883) | (2,222) | (4,407) |
| 25 | 24 | 49 |
| 152 | 144 | 296 |
| 3 | 1 | 1 |
| (27) | (45) | (24) |
| (102) | (20) | 27 |
| (37) | (57) | (77) |
| 6 | 210 | 162 |
| (10) | 8 | 29 |
| 283 | 96 | 144 |
| 43 | - | - |
| (2,547) | (1,861) | (3,800) |

Notes

1. Copies of this statement are being sent to all shareholders. Copies are also available at the registered office of the Company, Medawar Centre, Oxford Science Park, Oxford OX4 4GA
2. On 17 January 2000 the Company issued 13,700,000 new ordinary shares of 1p each at 38p per share, raising cash proceeds of £5,206,000 before expenses. On 18 May 2000 the Company issued 500,000 new ordinary shares of 1p each at 55p per share, raising cash proceeds of £275,000. Subsequent to the period end, on 9 August 2000 the Company issued 14,600,000 new ordinary shares of 1p each at 60p per share, raising cash proceeds of £8,760,000 before expenses.
3. The interim results are unaudited and do not constitute statutory accounts within the meaning of section 240 of the Companies Act 1985. The interim results are prepared in accordance with the accounting policies set out in the Report and Accounts for the year ended 31 December 1999 but have not been reviewed by the auditors. The financial information relating to the year ended 31 December 1999 has been extracted from the full report and accounts for that period which have been filed with the Registrar of Companies. The report of the auditors on those accounts was unqualified.
4. The basic loss per share has been calculated by dividing the net loss for the period by the weighted average number of 154,885,490 shares in issue during the six months ended 30 June 2000 (six months ended 30 June 1999: 132,956,799, year ended 31 December 1999: 137,599,908). The Company had no dilutive potential ordinary shares in any of the periods, and there is therefore no difference between the loss per ordinary share and the diluted loss per ordinary share.



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